

ABSTRACT OF THE DISCLOSURE

A center vacuum rotary drill bit including a rotary drill bit body and an insert. The bottom surface of the slot has a projecting key that  
5 cooperates with a depression keyway of the insert. Generally vertical sidewall surfaces of a depression keyway and vertical surfaces of a projection key provide mechanical resistance against lateral movement of the cutting insert. This mechanical resistance  
10 reduces displacement of the insert with respect to the bit body during brazing and thus a high quality, accurately aligned drill bit assembly is provided by applicants' invention. The depression keyway is designed so as to minimize the effect of the axial load  
15 on the insert by avoiding sharp corners which tend to amplify nominal stress and provides an insert of a proper carbide density after pressing. Integral bit body protuberance means adequately separate the insert within the slot and permit braze flow between the  
20 insert and slot. The protuberance means enhance braze flow when braze is fed between the insert body and bit body.